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A GUIDE TO CROP PRODUCTION IN QUEBEC. PART I

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MARCH 1967



THE MACDONALD LASSIE

# *macdonald* FARM *journal*

VOLUME 28, No 3, MARCH 1967

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## **SPECIAL ISSUE:**

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**COVER:** Infinite patience and thousands of hours time over a period of ten to fifteen years go into the development of a new variety. Our cover shows the anthers being removed from an oat flower as the first step in crossing two oat plants.

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## FREE FOR THE TAKING

Sometimes things get out of focus. It is too easy to forget, with all the problems of seeding, cultivating and harvesting, that the largest part of the basic ingredients needed for the production of a crop—carbon, hydrogen, oxygen and energy—are abundant and free for the taking. Grudgingly, we add those few small items which cost us money, and without which a crop cannot reach its potential.

Basically, a farm is a tiny patch of green vegetation on the face of the earth. Its sole purpose is to capture the energy of the sun and store it, for ultimate release as human energy. Man's job, very simply, is to husband those patches of green so they store away sufficient energy to meet his needs, for he has found no way yet to manufacture from the raw elements the basic component of all food, starch, nor has he found a vast source of energy to challenge the sun.

As the centuries and the years roll by, man is requiring that each patch of green pick up and pack away a greater amount of the abundant energy that falls on it. He chooses therefore the useful species of plants that grow best in each green patch. He selects varieties of those species which are more efficient in intercepting the sun's energy, which are more efficient in storing that energy as starch and oil. He adds elements to the soil, to build more rapidly plant structures when the soil releases those elements too slowly. He removes water from the soil when it cuts off essential oxygen to the breathing roots; he adds water when moisture level is too low for tissue building. He destroys plants he considers less efficient, less useful when they compete with his chosen crop for sunlight, space, and nutrient elements. He destroys other animals which compete with him for the energy-rich plants.

It is simple in concept, this plant husbandry. Simple, yet shrouded by the complexities of civilization—the cost of gasoline and the price of herbicides, trade policies and price supports, income tax and marketing boards, fertilizer rates and with quotas.

It is easy, then, to lose sight of the fact that the basic ingredients in the production of a crop are free. Energy is as free as the sunshine which brings it.

Free and abundant also are carbon, hydrogen, and oxygen—the three building-blocks of nature's storehouse for energy. These three alone are nine-tenths of every bag of grain. The husbandman's contribution, by comparison, is small indeed. He needs only to choose the plants for his patch of green, and then to cultivate the environment in which they flourish, removing one by one, as each occurs, the factors which limit their productivity.

*Walker Riley*

## INSIDE

### THE EDITOR'S COLUMN

## H.R.C. AVISON—PIONEER

In the recent death of Professor Harry Avison the Macdonald community lost a man who for over a quarter of a century was exceedingly influential in many aspects of College, University, Provincial and National life. He came to the College in 1940 to join the English Department and later to become its Chairman and in 1948 Director of the Adult Education Service.

In the former post, he is remembered with profound respect mingled with recollections of his sympathetic understanding of students. Graduates tell endless stories of the help he rendered in his rather personalized approach to an improved use of the English language—in both oral and written forms. Few meetings of the Faculty occurred where he did not make a special case for a student in academic trouble. Through the doors of 15 Maple Avenue passed more students than entered the home of any Faculty member over a generation. Generally it was to join the fine large Avison family in joyous parties and in discussions; but many students in trouble

(Please turn to page 22)

# FEATURE ISSUE:

## A Guide to Crop Production in Quebec, Part 1

In this issue, and in the issue which follows in April, we are pleased to present a review of the principles and practices of the management of the principal field crops in Quebec. The crops that will be grown in the next decade are those with the potential to respond to advanced management practices. This issue deals with Hay and Pasture crops, and with the Small Grains. In April, we will look at corn for Grain and Silage, Annual Forages, and the Oil Seed Crops.

Our field crops in Quebec can be considered to fall into three very broad groups. In the first group we find the coarse grains such as oats, barley, feed wheat and grain corn. With these crops we have two choices on the majority of our Quebec farms: either to feed them to our animals and market as an animal product, or to sell directly on the market, particularly if we have an overproduction. The second general group can be considered as those crops which must be sold as harvested. There is no easy way to use them on the farm; they are, strictly speaking, a cash crop. Here we have crops such as soy beans, flax, our canning crops, rapeseed, etc. The third general group are the roughages, the forage crops, which must be fed to an animal and marketed as an animal product. In either group, however, we have the same objective: to

achieve maximum production per unit area of land of the highest quality of the crop material. To settle for anything less than that means that we are not achieving the potential of our primary resource, our land. To achieve this potential, it requires a combination of many things, soil fertility, drainage, control of pH, choice of the right variety and last, but not least, the good management skill which the farmer adds to the whole operation. The requirements may be quite specific for some crops; even some varieties within a crop may require different management to another variety. The farmer must also recognize that a decision to change from one crop kind to another crop kind, or sometimes even to change from one variety to another variety, means that there could be far-reaching implications in his whole farm operation. For example, the decision to grow

corn means to the farmer that he must also decide to prepare his land early, to seed his corn early and give it preference over other farm operations, to use high fertility, to use good weed control practices, and, above all, to choose the variety best adapted to his particular situation.

One cannot stress too much the need for the farmer to develop a consciousness of the potential of his crops. The ultimate test of any farm operation is obviously the dollars which it returns to the farmer. Irrespective of whether those dollars are earned from milk in a pail or grain in a bin, or meat on an animal, to achieve this requires a high level of managerial skill on the part of the farmer to obtain the optimum balance between his primary resource, his soil, his crops to grow on that soil and/or his animals to use that crop production.

### THE CONTRIBUTORS



Dr. Steppeler



Dr. Klinck



Dr. Bubar



Dr. Brawn



Mr. Keeler



Dr. MacKenzie

Dr. Howard Steppeler is Chairman of the Department of Agronomy. He has a broad interest in developing the potential of all crops adapted to Eastern Canadian conditions. Dr. Harold Klinck specializes in cereal crops. He is a member of the provincial, federal and private organizations responsible for the introduction of new varieties, and has several of his own to his credit including Dorval oats and Champlain barley. Dr. John Bubar, in charge of the forage breeding program, has his first licensed variety on the market—Leo trefoil. Dr. Robert Brawn's specialty is genetics. His corn breeding program is supplying valuable material for research and variety development. One variety, M.C.101 is outstanding for early maturity. W. W. (Wink) Keeler is Superintendent of the Agronomy staff, he has a special interest in chemical weed control. Dr. A. F. (Gus) MacKenzie, as Chairman of the Department of Soils, has an intensive research program in soil fertility on the go. Under his direction, the new automated soils lab came into being last year.



## Hay and Pasture Crops in Quebec

Forage crops occupy in excess of 60% of our cultivated acreage, and when one considers the so-called natural pastures, then the total farm acreage in roughages goes well beyond the 60% level.

There is good reason for thinking forage crops will continue to hold this prominent position in Quebec. Climatically, with an excellent distribution of moisture through the year and long relatively cool summers, the province is ideally suited to forage production. The dairy cow, firmly established in the Quebec agricultural industry, is well equipped to economically process this material into human food.

Our job, then, is to provide this animal with an acceptable package of forage containing as many units of digestible nutrients as possible, at the lowest cost per unit. Restated, our objective in forage crop production is to produce a high yield of material, with high nutritional value and with persistent production.

### Which To Plant Where

The mixtures recommended for use in the various zones of Quebec are presented in the Recommendations of the Quebec Seed Board booklet. Each mixture contains at least one grass and at least one legume. A mixture is recommended for conditions where each of the component species is expected to perform well. The grasses included are *timothy*, which is the most extensively seeded of these grasses and which is well adapted to most of the good farmland in our area. *Bromegrass* may be chosen in preference to timothy in certain situations, particularly where alfalfa is the legume being

used and where cultivated crops are not being used in rotation with hay and pasture. It possesses a special adaptability to coarser textured soils. *Reed canarygrass* tolerates flooding and serves as grass for wet land. *Orchard-grass* is a risky grass to grow due to winterkilling but it does provide some early growth and it possesses a good ability to respond to midsummer rain or to irrigation. The selection of the suitable legume generally receives more attention than the choice of grass due to the specific requirements of our most productive legumes. Alfalfa is the highest yielding legume but it is suited only to deep, well-drained soils, it does not tolerate acidity and it must be properly fertilized. *Trefoil* tolerates many conditions, particularly shallow or poorly drained conditions where alfalfa fails, but it requires careful management and we still are not able to prescribe a fool-proof system for growing this crop under all conditions where it should succeed in Quebec. Best performance with this legume in Quebec has been in the areas around Montreal and up the Ottawa Valley. *Ladino clover* does best as a pasture legume in the moist areas, particularly where summer drought is not generally severe. *Red clover* does consistently well in most of Quebec during the one hay year in which it predominates but it is losing favour due to its lack of persistence. *Alsike* makes a fair showing in some areas but comparative trials have shown that little, if any, benefit is gained by adding this as a second legume in any mixture and it does not equal the other legumes when it is the only one in a mixture.

The first step towards achieving either one or all of these three objectives is in the selection of the variety and of the use of pedigreed seed of that variety. The farmer should recognize that the cost of seed for his forage mixture is the smallest part of the total cost of establishing a new stand of forage. To use a variety which costs 50¢ per pound as opposed to commercial seed at 25¢ per pound will only add about \$2.00 per acre, and if this improved variety results in more persistence and/or higher yield and quality the end result may be an additional cost of 25¢ or 50¢ per ton of forage produced. When you balance this against the cost of land preparation, of harvesting charges, one should see that it is a poor economy to use a low quality or indifferent-performing variety.

### Varieties For Quebec

**ALFALFA.** The short-lived or "Flemish" types include *Alfa*, *DuPuits* or *Glacier*. *Glacier* has proven superior to *Alfa* or *DuPuits* in most trials, particularly in its ability to persist better and it should be first choice for those who want an alfalfa of this type.

Longer-lived, hardier varieties include *Vernal*, which has been hard to beat over the past 10 years. *Narragansett* and *Rhizoma*. *Cayuga* is a new variety from New York State that has performed well at Macdonald College. It appears to have almost as much vigour as the Flemish types and the persistence of *Vernal*.

**RED CLOVER.** Four double-cut varieties are approximately equal in performance here. These are *Dollard*, *La-salle*, *Ottawa* and *Lakeland*. For those

who want a later, single-cut type, *Alta-sweade* is a good choice.

**LADINO CLOVER.** *Merit* is the best of the available varieties in our trials. Otherwise seed that is *certified to be Ladino* is recommended to ensure that you get true Ladino seed.

**BIRDSFOOT TREFOIL.** *Empire* is the standard variety well suited to our conditions and for which plenty of seed is available. It is particularly useful on low, wet land and makes an excellent late hay crop, especially when mixed with a late maturing timothy variety such as *Drummond*. *Viking* is an earlier maturing variety with which winterkilling may be a problem. It matures for hay along with *Climax* timothy. *Leo* seed supplies are still very limited and the 1966 crop is scheduled to go mainly for further seed increases. The 1966 trial data in Quebec indicated a considerable superiority over *Empire* or *Viking*. Since *Empire* seed is available now, farmers should use this variety to get experience with trefoil rather than waiting for *Leo*.

**TIMOTHY.** *Climax* is the most readily available variety and is a good choice. It will produce superior quality hay to common seed. *Drummond* is later and is the best choice to put with *Empire* trefoil as a later hay crop. *Drummond* seed is in good supply in 1967, as is *Empire* trefoil. Although *Drummond* seed will not drop to the "fire sale" prices of *Climax*, farmers are advised to pay the slight premium that *Drummond* carries for each acre seeded to get the two well-matched late varieties together. *Milton* is an earlier variety that is expected to be available in 1968 for those who want an earlier maturing hay variety.

**BROMEGRASS.** The new variety from Ottawa, *Rideau*, is a fairly hardy and quite late maturing variety. *Hercules* is a very early and quite hardy variety. If you cannot obtain seed of one of these, better wait before you try orchardgrass.

**REED CANARYGRASS.** No varieties available. It is important to use fresh seed (grown last year) because the seed of this crop loses vitality very quickly in storage.

There will be an increasing number of forage varieties produced in the future to satisfy specific requirements and to have very specific characteristics. Already we see appearing on the scene mixtures of particular varieties, for example, *Empire* birdsfoot trefoil and *Drummond* timothy — not just birdsfoot trefoil and timothy. More and more of this will appear in the future and the farmer would do well to watch for these improvements and to carefully match his grass and legume varieties.

## NOTES ON CHEMICALS

All the rates of the various herbicides in this series of articles on crops are given in terms of **active ingredient** per acre. Be sure to check the concentration of the product you buy and make suitable modifications in the amounts you use. The directions which accompany the product are your best source of information and these directions should be followed.

Care at time of application cannot be overemphasized; your sprayer must be calibrated in order to know the amounts of chemical and water you are putting on an acre of land. Remember that Atrazine is abrasive and can wear nozzles badly; the rate of application may increase to a dangerous level with prolonged use. Periodic checks must be made to maintain the accuracy of your machine.

Some crops are quite susceptible to the volatile fumes and drift of some of the herbicides. So to avoid injury to such crops you had better choose a day when there is no wind blowing or when the wind blows from the direction of the susceptible crop.

We have a very small number of grass and legume kinds from which to choose. Thus, orchard grass is very much in the questionable category. There are some hardy varieties now available. To introduce them to the farming program the farmer must also recognize the need for specific management in order to utilize them to their full potential.

### Cultural Practices:

This is an involved and critical subject that cannot be condensed into any cook-book recipe for successful production. It is possible to get the potential yields out of our recommended varieties in our recommended mixtures by applying the correct fertilizer and the right amount of lime, by preparing the land properly and managing the grain crop under which the forages are sown in such a way as to not severely

harm the forage seedlings. If used for pasture, the way in which animals are controlled is a critical factor. Date of cutting is a major factor in how much milk or meat a hay field will yield. Fall management is necessary for alfalfa and desirable for any of these crops although some — like reed canarygrass and *Empire* trefoil are able to persist where it is not practical to provide good drainage.

The potential top yield may exceed 8 tons of good alfalfa-grass hay per acre or over 5 tons of trefoil-grass from three cuts per season. Good Ladino-grass pastures may exceed 8000 pounds of dry matter (equivalent to 8000 lbs. of milk). Most fall far below these possible yields.

The key to forage production is good establishment. As well as the essentials of good land preparation, the choice of adopted varieties, and adequate fertility, the choice of companion crop is of major significance. It must be realized that the primary objective is to establish the forage mixture, with the harvesting of a grain crop a secondary objective.

**DIRECT SEEDING** of forages without a companion crop is now a successful practice on many farms. Yields over two tons per acre are possible in the year of seeding. The decision depends on the relative value of grain and forage in the year of seeding. Weed control is essential.

### Fertilizer Recommendations

**LEGUMES:** Legumes have low nitrogen but high phosphorus and potash needs. The phosphorus should be added at seeding time in order to work it into the soil. Broadcast phosphorus moves very slowly into the root zone. Potassium can be added at seeding time and also can be top-dressed at any time during the life of the pasture. Potassium is more mobile and will leach into the soil and become available to the legume. Potassium, however, should be applied more often during the growing season because it is absorbed by the plant in excessive amounts if readily available. Boron will probably be necessary in sandier soils, particularly if they have been limed recently. Soil pH should be between 6.5 and 7.5. Also, legumes require well drained soils and tile drainage may be necessary.

| Legume                    | 2,4-D<br>amine salt<br>oz/acre | MCPA sodium or<br>amine salt<br>oz/acre | 2,4-D<br>ester<br>oz/acre | MCPB<br>sodium salt<br>oz/acre |
|---------------------------|--------------------------------|---|---------------------------|--------------------------------|
| Alfalfa<br>(vernal type)  | 4                              | 6                                       | 20                        | —                              |
| Alfalfa<br>(DuPuits type) | 0                              | 0                                       | 20                        | —                              |
| Red Clover or alsike      | 4                              | 6                                       | 20                        | 24                             |
| Birdsfoot trefoil         | 6                              | 4                                       | 20                        | —                              |
| Sweet clover              | 0                              | 0                                       | 0                         | 0                              |

Alfalfa requires more fertilizer, especially potash than the other legumes.

**GRASSES:** Nitrogen fertilization is the key to high grass yields. Nitrogen should be applied in the Spring to get maximum production in June. Applications in June, after the first cut, will help extend grass production in the summer and early fall. Unfortunately legumes may be crowded out by the grasses when nitrogen fertilizers are used.

Phosphorus will be required for the establishment of grass and most of the needs for the rotation should be supplied at seeding time. Potassium may be needed at seeding time and can be top dressed as needed during the life of the pasture. Phosphorus and potassium needs are less for grasses than for legumes.

**MIXTURES:** Fertilization of mixtures of grasses and legumes depends on the proportion of legumes in the stand. If legume content is 50% or more, fertilize as for legumes. If legumes are 30% or less, fertilize as a grass. Between 30 and 50% legumes nitrogen needs will depend on the proportion of legumes.

#### Chemical Weed Control

**ESTABLISHING FORAGES WITH A SEEDED COMPANION CROP.** The table on page 7 shows the chemicals and the maximum rates to use depending on which legume dominates the mixture. For control of susceptible and suppression of intermediate broadleaf weeds amine or sodium salts formulations are desirable. 2,4-DB or MCPB may control resistant weeds because larger amounts can be used without damaging the seedling legumes.

If 2,4-D or MCPA is used, the companion crop should be developed at least to the 3-leaf stage so that the cereal leaves protect the legume plants from some of the herbicides. If 2,4-DB or MCPB is used application should be made before the legumes have more than 3 true leaves.

#### Establishing Alfalfa or Birdsfoot Trefoil without a Cereal Companion Crop

To control lamb's quarter, pigweed, mustard and other susceptible broadleaf weeds use 16-20 oz/A of the ester form of 2,4-DB. If barnyard grass or foxtails are a problem use 1-1/2 to 3 lbs. of dalapon per acre. When grasses such as timothy, brome, and orchard grass form part of the forage mixture do not use dalapon.

2,4DB and dalapon can be applied separately or as a tank mix before the legumes have more than 3 true leaves.

#### Established Grass Pastures

The best method for controlling weeds in pastures is good management. Tall weeds should be mowed before they form seeds, this will prevent their spread by seeds and to some extent by vegetative means. Roadsides, fences, and other waste spaces can become sources of weed seeds and should be sprayed to control the weeds. Controlled grazing helps to maintain a thick stand of forage plants and makes it more difficult for weeds to become established.

In some cases lime and fertilizer applications will help to control such weeds as paintbrush, ox-eye daisy, wild strawberry and wild carrot but the presence of Canada thistle, dandelion and buttercup will not be affected. Proper use of herbicides will help in their control. For optimum yields and for the best weed control both fertilizers and herbicides are required.

Some injury to legumes must be expected when 2,4-D, MCPA and amitrole are used, but yields will usually be as good or better because the grass growth is stimulated when weeds are controlled.

Such poisonous plants as ragwort, buttercup, and chokecherry become more palatable to livestock when sprayed with 2,4-D. It is advisable to keep grazing animals away from the treated area until the foliage of such plants is dead.

Two applications of 2,4-D ester at 16 oz/A, one in June and the second in September will give good control of Blueweed, Burdock, Dandelion, Cinque-

foil, Goatsbeard, Field bindweed, Goldenrod, Hawkweeds, Mullein, Ox-eye daisy, Plantain, Canada thistle, Nodding thistle and vetches.

Most pastures will have infestations of milkweed. Amitrole or Amitrole-T at 1/2 lb. in 6 gallons of water for spot treatment or 3 lbs. per acre as an overall spray are the current recommendations. Thorough wetting of the foliage is essential and application should be made when all shoots have emerged, probably in July. Regrowth and new seedlings can be treated when they appear. Grasses and legumes will be injured, however.

When Yellow Rocket is a problem 16 oz/acre of 2,4-D or MCPA in September or warm days in October will control old rosettes and seedlings which have germinated during the summer.

To control Hardhack 2,4,5-T ester at 1 to 1-1/2 lbs. per acre in 50 gallons of water at 100-150 (psi) during the first bloom period has met with good success. Thorough coverage of the foliage is important and retreatment may be necessary.

#### Established Forage Legumes (1 year or more old)

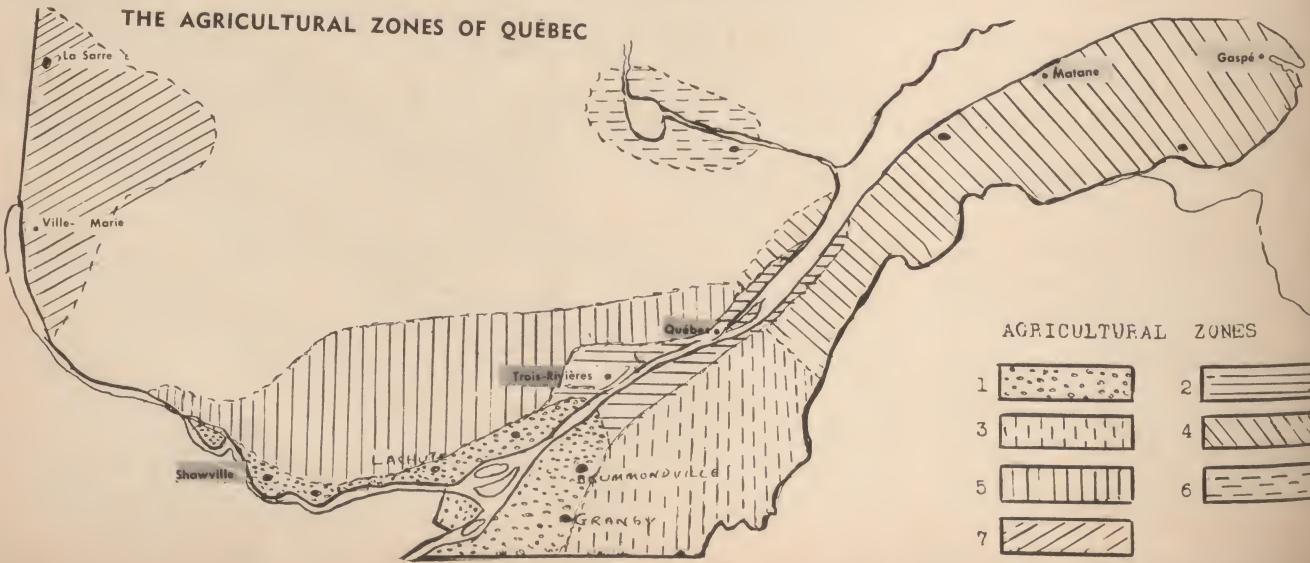
Yellow rocket is the chief offender in established legumes. This weed is a biennial and overwinters as a rosette, when growth starts in the spring it immediately forms flower buds. Spring treatment is rarely successful because the herbicide must be applied before the flower buds appear on the weed. Field conditions and pressure of other work may make it impossible to spray at the proper time. Because of this fall treatment is recommended.

To reduce the spread of Yellow rocket seed, forage fields which are infested with Yellow rocket should be cut early (late May) and made into silage, haylage or hay.

In September or October 20 ounces per acre of 2,4-DB ester in 20 gallons of water will control established and seedling rosettes of Yellow rocket as well as Canada thistle and Chickory if they are present.



#### THE AGRICULTURAL ZONES OF QUÉBEC





## Small Grains for Quebec Farms

Small grains—wheat, barley, oats and rye—are generally adapted to a wide range of soil and climatic conditions. They can be grown in all agricultural zones of Quebec. All are best adapted to fertile, well drained silt and clay loam soils. Oats are generally the easiest crop to grow as regards soil adaptation. They are less adversely affected by poor drainage or acidity than are barley or wheat. On well drained, fertile soils, however, barley and wheat will generally outyield oats, particularly under neutral or slightly acid conditions. Because of its deep root system, rye will generally respond better than the other small grains on sandy soils or soils low in fertility. Drainage is particularly important in winter wheat production: on poorly drained soils, heaving and flooding may occur during early spring that destroys young plants. Fertility balance is important. Wheat and rye lodge less readily than barley or oats under conditions of high fertility where nitrogen level is excessively high. Lodging interferes with development of the grain, resulting in lower yields. In addition, lodging creates harvesting problems.

Small grains prefer cool, moist conditions, and during a season in which such conditions prevail the best yields and grain quality may be expected. Hot, dry conditions during the period from heading to maturity interfere with grain filling. Oats have the highest water requirement among the small grains and suffer most from hot, dry conditions. Cool, moist conditions promote the development of plump grains, high in starch and low in protein. Hot, humid conditions over an extended period are conducive to build-up of disease organisms that attack leaves and stems: rust, mildew, Septoria. Such infections re-

duce photosynthetic efficiency and interfere with grain filling.

Winter wheat and winter rye production are limited by severe winter temperatures. Winter rye is more hardy and therefore safer than winter wheat. Winter wheat varieties differ in their ability to survive winter conditions, but production of this crop in Quebec is limited primarily to Zones 1, 2 and 3.

### The place for small grains

The small grains grown on the farm generally fit a dual role. They provide the high-energy feed required in any animal enterprise and they probably act as the companion crop to the establishment of roughage. Obviously, if the crop is not undersown the second role has no bearing on our choice of crop to grow. Our criteria for choice, however, may be the same. We should look for a high-yield potential, a crop which is adapted to high fertility usage, that is, one that does not lodge, therefore also a crop with a strong straw and non-shattering tendencies. When the crop is to act as a companion to a forage seeding we should also consider the competition which that crop is likely to offer to the young forage seedlings. Thus, we might think of reducing the rate of seeding in order to reduce the competitive effect.

A crop which has been under-sold in Quebec, and whose acreage is declining, is barley. This is one which the farmer should look to. It has a much higher yield-potential than oats in those areas in which it is adapted and there is a good market for high quality barley. Another crop which the farmer should watch for in the future is feed wheat. Feed wheats are relatively untried in Quebec. In those areas in which they are grown the yield potential is very high,

almost equal to that of corn. In general, they are much stronger-strawed than the oats or barley varieties and hence could play the dual role which has been mentioned for coarse grains on our farms.

All three of these crops have good market potential as well as being desirable feed for animals, but requiring some change in the feeding practice if they are to be fed to animals.

Our old standby, oats, has a very wide range of adaptation in the province, has a relatively consistent yield-performance, but unfortunately cannot compete with the other crops in those areas in which they are adapted. The farmers who are fortunate enough to live in those areas in which the other crops are adapted should seriously consider an introduction of them into their farming system, but the same farmers must also recognize that to introduce them will require changes in their handling of their coarse grains.

### Variety Recommendations

**EARLEY:** Only three varieties are recommended for Quebec.

*Champlain* is a medium early variety with fair to good resistance to lodging and high productivity. It is not suitable for malting. *Champlain* is the best choice for all areas except Zone 7 where it tends to mature too late.

*Parkland* is an early variety, suitable for malting as well as for feed. It has better lodging resistance than *Champlain* but is slightly less productive. *Parkland* can be grown in all Zones.

*Nord* is a very early type, recommended only for Zone 7. In other areas it is not as high yielding as *Champlain* and *Parkland*.

**OATS:** Five varieties are in the recommended list.

*Dorval* is a medium-late maturing variety, considered the best choice for Zones 1, 2 and 3. It has medium strong straw and yields well. This variety is not recommended where rusts are known to be a problem.

*Glen* is an early sort adapted to all Zones. It possesses some rust resistance but is not suitable for places where lodging is a problem.

*Garry* is the strongest strawed variety among those recommended. It has good disease resistance and can be grown in all areas except Zone 7 where it matures too late. *Garry* is classed as a medium early variety. Its chief fault is a rather high percentage of hull.

*Shefford*, another early maturing variety, has performed well in all except Zone 6. It has good lodging resistance but is prone to shattering at maturity. *Shefford* should not be grown in areas where stem rust is a problem.

It has a low percentage of hull but the grain tends to be bulky due to a long, thin tip which prevents packing.

*Roxton* is a late-maturing variety limited to Zone 1. While it is reasonably productive it is likely to be replaced on many farms by *Dorval*. *Roxton* has medium strong straw and large grains with low hull content. It has limited rust resistance.

**GRAIN MIXTURES:** Recommended mixtures are Champlain barley with *Glen* or *Garry* oats, and Parkland barley with *Glen* or *Shefford* oats.

#### Spring Wheat:

*Selkirk* is the only spring wheat variety recommended at the present time. It is early maturing and has strong straw and good disease resistance. Since this variety was developed for western Canada it is not as well adapted to Quebec conditions as would be desirable, but is likely the best variety available at the present time.

**WINTER WHEAT:** Only three varieties have sufficient winter hardiness for Quebec conditions. Severe losses can be expected in some years due to severe winter conditions. All are soft, beardless types, suitable for the pastry flour milling trade as well as for feed.

*Richmond* is the most winter-hardy of the group and is recommended in Zones 1, 2 and 3.

*Genesee* and *Talbot* are limited in their adaptation to Zone 1 because of limited winter hardiness.

#### Winter Rye:

*Horton* is resistant to winterkilling and is particularly useful as a forage crop or for green manure.

#### It pays to care

Maximum productivity in small grains can be achieved if attention is paid to the following basic principles:

1. The *correct crop* must be chosen for the prevailing soil conditions. If

soils are suitable for the production of high-energy crops such as barley or wheat, more units of energy per acre can be obtained than with oats. From an energy yielding standpoint, a 22-bushel crop of wheat is approximately equal to a 30-bushel crop of barley or a 50-bushel crop of oats. With spring sown varieties currently available, greatest productivity is likely to result from barley. However, in areas where winter wheat can be grown, this crop can be comparable to barley in energy yield. Currently available spring wheats are not likely to be as productive.

2. It is imperative that the *proper variety* be used. Varieties differ in their adaptation and productivity. All recommended varieties are productive. Seed of unknown varieties should not be used as the risks involved are great.
3. A *fertile soil* with a proper balance of nutrients and adequate, but not excessive, moisture will produce highest yields.

4. A *well prepared seed bed* is a must. Poor seedbed preparation results in poor stands, weak plants and lower yields. Soil must be finely crumbled to favour germination but it must be firm enough throughout to allow water to rise and spread in it by capillary action.

5. *Good seed* is the only seed that can guarantee good plants. Pedigreed seed, Certified or Registered, provides assurance as to variety, germination and purity. Seed should be treated with fungicides to control smuts and to protect the seedlings from soil-borne pathogens. Most Pedigreed seed on the market has been treated. In addition, Pedigreed seed conforms to regulations governing maximum infection of seed-borne diseases that cannot be readily controlled by seed treatment.

6. *Timely operations* are important. Spring-sown small grains should be planted as early as the soil conditions permit. Undue delays in seeding result in significant yield reductions and poorer quality. Fall sown grain crops should be planted early enough to permit good seedling growth prior to freeze-up. This can be achieved by seeding not later than mid-September. *Weed control* measures should be timed to provide maximum control with minimum crop damage. *Harvesting operations* should proceed in such a manner as to avoid losses through seed shattering or breaking down of over-ripe plants.

7. *Small grains should be dry* before placing in storage. Otherwise, unnecessary losses will occur from heating and moulding. Good storage facilities should be provided in order to prevent losses from rodents and insects, and should be designed to keep the grain dry.

#### Fertility Requirements

Small grains require fertilizer early in the growing season to get a quick start. Nitrogen and phosphorus are essential for root growth and rapid early plant growth. Potassium is necessary for later kernel filling. Therefore, fertilizers are banded with the seed at seeding time. Potassium can be pre-broadcast if necessary to reduce fertilizer burn. Nitrogen levels must be carefully watched to prevent lodging. However many general recommendations are too low for nitrogen; up to 50 lbs. N per acre is needed in many unmanured soils.

Barley for example contains 65 lbs. N, 27 lbs. P<sub>2</sub>O<sub>5</sub> and 18 lbs. K<sub>2</sub>O per 75 bushels. The soil must supply this and more to insure adequate leaf and stem growth. Actual rates depend on too many factors — soil type, field history, crop value — to make specific recommendations here. A soil test, coupled with personal experience, is your best guide.

Rarely, manganese is required for oats. Other micro-nutrient deficiencies in small grains are practically unknown in eastern Canada. Boron toxicity can occur with oats but only when boron levels are high.

#### Weed control in cereal crops not underseeded

**SPRING WHEAT, OATS AND BARLEY.** To control susceptible and suppress intermediate annual broadleaf weeds in wheat and barley use 6-8 ounces ester or amine salt of 2,4-D or 8 ounces of MCPA in 5-20 gallons of water per acre. High rates of 2,4-D and MCPA may injure oats and not more than 4 ounces ester or 8 ounces amine salt of 2,4-D or 8 ounces of MCPA are recommended. MCPA is less likely to injure the oats.

These herbicides should be applied when the grain is 4-6 inches tall. (between the 3-leaf and shot blade stage).

To control top growth of Canada Thistle, Sow thistle, Curled dock or other intermediate perennial weeds in barley and wheat use 8-12 ounces 2,4-D ester or amine salt in 5-20 gallons of water or 24 ounces of 2,4-D ester or MCPA sodium salt in at least 15 gallons of water. In the case of oats use 8 ounces of amine salt of 2,4-D or 8-12 ounces MCPA ester or amine salt in 5-20 gallons of water, or 20 ounces of 2,4-DB ester or MCPB sodium salt per acre in at least 15 gallons of water.

Injury to the cereals will be less than caused by a serious weed infestation. Roots of the weeds will not likely die from the above rates, after harvest cultivation and/or retreatment of regrowth in stubble with 2,4-D should complete the job.

Smartweed, wild buckwheat, corn spurry and many other broadleaf weeds in oats, barley and spring wheat can be controlled with dicamba at 1-2 oz/A mixed with 2,4-D or MCPA, or with a mixture of 2,4-D or MCPA and mecoprop sprayed at a rate of 6-8 ounces total per acre when the cereals are in the 3-5 leaf stage. Commercial mixtures are available.

**FALL WHEAT** No fall application is advisable, but spring treatment when

the wheat has reached full tillering up to early shot blade stage 4-6 ounces per acre of 2,4-D ester or 4-8 ounces per acre of 2,4-D amine salt or MCPA ester in 5-20 gallons of water will control annual and winter annual weeds.

**FLAX** Annual susceptible broadleaf weeds can be controlled with 4-8 oz/A of MCPA ester, amine or sodium salt in 5-20 gallons of water or 16-20 oz/A of MCPB-MCPA mixture (15:1) in at least 15 gallons of water.

One and one-half lbs. of dalapon in 15-20 gallons of water will control most annual grasses. It can be mixed with MCPA and put on as one application.

Treatment can be safely made from the time it is two inches tall until the early bud stage.

**CEREAL CROPS SEEDED DOWN.** See section on Forage Crops. □

## **H.R.C. AVISON**

### **MEMORIAL**

Friends of the late Harry Avison, as a memorial to him, are contributing to a memorial book collection (possibly Canadiana), to be circulated from the Travelling Library.

The McLennan Travelling Library (now one of the McGill libraries) was for years administered under Prof. Avison as Director of Extension at Macdonald College. It is largely as a result of his untiring efforts then that the Library exists today.

If you wish to pay tribute in this way, you may send your contribution to:

Mr. John Archer, Director,  
University Libraries, McGill University, Montreal—or we would be pleased to forward it for you—  
Extension Department, Box 237,  
Macdonald College Post Office,  
P.Q.



## **Next Month:**

**Part Two of...**  
**A Guide to**  
**Crop Production**  
**For Quebec**

# THE FAMILY FARM

PUBLISHED IN THE INTERESTS OF THE FARMERS OF THE PROVINCE  
BY THE  
QUEBEC DEPARTMENT OF AGRICULTURE AND COLONIZATION

Compiled by T. Pickup of the Information and Research Service,  
Quebec Department of Agriculture and Colonization.

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Germination Free of Charge

Reorganization in Inspection  
Of Fruits and Vegetables

PHOTOGRAPHS BY  
OMER BEAUDOIN

## MODERNIZATION OF DAIRY PLANTS

The Honorable Clément Vincent, Minister of Agriculture and Colonization has announced the approval by the Provincial Government of the necessary credits for the implementation of the second phase of the modernization of dairy plants in the Lower St. Lawrence region.

This modernization and the amalgamations involved are centered round the two plants of the Lower St. Lawrence Regional Cooperative situated at Mont-Joli and Notre-Dame-des-Neiges de Trois Pistoles.

Mr. Vincent states that the implementation of this second phase will solve the problem of dairy plants in the Lower St. Lawrence region for the year 1967. However, the study of other milk sheds (sources of milk supply) in the region is progressing at a very satisfactory pace and, as of this year, continued the minister "the population of this territory will be consulted concerning this third phase of consolidation".

The second part of the consolidation plan involves modernizing plant equipment, amalgamation, establishing subsidiary plants, etc. Moreover, the government should be able during the next few months to announce further measures regarding improvements in the quality of raw milk and readjustments of price of products not covered by the federal price policies.

This specific program announced today, according to Mr. Vincent, will mean an appreciable increase in income for dairy farmers because, starting this year, the territory will have two plants capable of processing the whole milk which producers may deliver to them. These two plants will have a total capacity of approximately 180 million pounds of milk.

"This new phase," concluded the Minister, "will permit quicker realization of one of the fundamental recommendations contained in the Plan of the Eastern Quebec Planning Bureau."

A charming scene on the farm of André Bélanger at Saint-Lin, Assomption.



# ASSISTANCE POLICIES

## Reference List

This page supplied in the interests  
of the Family Farm by the Quebec  
Department of Agriculture and  
Colonization.

### IMPROVEMENT OF LIVESTOCK

- A) 1 — Assistance for horse breeding in settlement areas
- 2 — Assistance for the improvement of horses
- 3 — Premium for the purchase of approved stallions
- 4 — Premium for the purchase of purebred mares
- B) 1 — Purchase of grade heifers for settlement centres
- 2 — Assistance for the purchase of beef cattle
- 3 — Assistance for the purchase of beef cattle (Northwest Quebec)
- 4 — Special assistance for the purchase of purebred heifers
- 5 — Assistance for the purchase of registered purebred beef bulls (Northwest Quebec)
- 6 — Assistance for the purchase of registered purebred beef bulls in settlement areas
- 7 — Assistance for the purchase of dairy cows
- 8 — Special assistance for the purchase of dairy cows (Northwest Quebec)
- 9 — Steer and lamb competitions for young settlers
- 10 — Premium for the purchase of purebred bulls
- C) 1 — Assistance for the production of market hogs in Northwest Quebec
- 2 — Classification of purebred swine
- 3 — Progeny testing of purebred swine
- 4 — Assistance for keeping mature purebred boars at service
- 5 — Premiums for the purchase of purebred pigs
- 6 — Regulations concerning the payment of a premium on market hogs
- 7 — Supervision of the health of herbs of purebred pigs in Quebec
- D) 1 — Assistance for sheep raising
- 2 — Classification of purebred rams
- 3 — Regulations concerning the payment of a premium on market lambs
- E) 1 — Assistance for poultrykeeping in settlement areas
- 2 — Certification of poultry flocks and hatcheries
- 3 — Competitions for the improvement of poultry enterprises
- 4 — Encouragement for the improvement of poultry strains
- F) 1 — Assistance to Quebec mink rearers
- 2 — Compensation for owners of animals dying of rabies
- 3 — Anti-brucellosis vaccination (federal-provincial)
- 4 — Preventive vaccination of mink against distemper, botulism and virus enteritis
- 5 — Vaccination against "blackleg" (symptomatic anthrax)

### CROP IMPROVEMENT

- G) 1 — Assistance for the transport of superior seed
- 2 — Oats growing competition
- 3 — Better farming competition
- 4 — Grain-corn growing competition

- 5 — Subsidy for the purchase of sprayers (fruit, vegetables, weeds)

### AGRICULTURAL DISASTERS

- H) 1 — Assistance regarding forage seeds for farmers whose crops were seriously damaged in the fall of 1964
- 2 — Assistance for the purchase of seed to farmers whose crops were seriously damaged in the fall of 1964
- 3 — Federal-provincial assistance plan for farmers in drought-stricken areas in 1965

### SOIL IMPROVEMENT

- I) 1 — Assistance for the transport of fertilizers
- 2 — Encouragement for the use of marl
- 3 — Encouragement for the use of ground limestone in agriculture
- 4 — Subsidy for the purchase of fertilizer
- 5 — (Mechanized) Farm improvement projects
- J) 1 — Construction of new party watercourses or line ditches
- 2 — Construction of farm ponds
- 3 — Improvement of municipal watercourses
- 4 — Underdrainage (tile drainage)
- 5 — Land improvement works (ARDA)
- 6 — Land improvement works (Northwest Quebec)

### MARKETING

- K) 1 — Assistance for the benefit of settlement parishes for the transport of cream
- 2 — Postal cow testing (dairy herd improvement)
- 3 — Regulations concerning the payment of a premium on industrial milk
- 4 — Policy concerning the payment of a grant for the amalgamation of dairy products factories
- L) 1 — Assistance for the transport of livestock for slaughter
- 2 — Regulations concerning the granting of a subsidy for the construction or equipment of farm milk-houses

### AGRICULTURAL ESTABLISHMENT

- M) 1 — Credit for settlers
- 2 — Farm Improvement Act (medium-term loans)
- 3 — Act to amend the Act regarding Farm Loans
- 4 — Quebec Farm Credit Act (long-term loans)
- N) 1 — Assistance for agricultural establishment (new farm enterprises)
- 2 — Financial assistance for farm consolidation
- 3 — Assistance to encourage regrouping of farmlands
- 4 — Drilling of artesian wells by well-drillers
- 5 — Premiums for clearing, stump-removal, and breaking (ploughing)
- 6 — Farm beautification contest in connection with Expo '67

(please turn overleaf)

## STUDY BURSARIES, SCHOLARSHIPS, AND ASSOCIATED GRANTS

- O) 1 — Study bursaries for members of young farmer's clubs
- 2 — Scholarships for advanced studies
- 3 — Bursaries for further education of civil servants
- 4 — Farm management clubs
- 5 — Annual competition for junior farmers (aged 12 to 25)
- P) 1 — Research grants (civil servants)
- 2 — Groups for the study of farm profitability (profit and loss)
- 3 — Provincial Junior Agricultural Merit Contest

## HONEY 1966

There were 1,720 bee-keepers in the province of Québec in 1966 as compared with 1,800 in 1965. Estimated at 43,550 for the year under review as against 44,300 in 1965, the number of hives shows a slight decrease.

The honey crop for 1966 is estimated at 3,266,000 pounds against 2,392,000 pounds in 1965. Average production per hive was 75 pounds

as compared with 54 pounds the preceding year.

Total production for 1966 is divided as follows: white honey, 76 per cent; dark honey, 21 per cent; comb honey 3 per cent.

The value of the 1966 honey crop is \$882,000 while that of 1965 was \$646,000. The average weighted price paid to producers per pound of honey (excluding containers) was 25 cents, as compared with 27 cents in 1965.

The aggregate value of honey and beeswax, estimated at \$902,000 in 1966, shows an increase of 36 per cent over 1965 when it totalled \$662,000.

**This page supplied in the interests  
of the Family Farm by the Quebec  
Department of Agriculture and  
Colonization.**

## PROTECT POTATOES FROM TURNING GREEN

Potatoes that have turned green are unsightly and have a bitter taste, caused by the solanine which is produced naturally in tubers exposed to even a little light.

According to a recent article in the American Potato Journal, a light-intensity of 5 foot-candles is enough to cause greening. This effect is of great importance in most shops, where the illumination ranges from 20 to 70 foot-candles, — especially in the case of immature tubers which have previously been left lying in the sun for

over half an hour; subsequent storage or display of such potatoes in the light adds to the greening, because the effect is cumulative.

Jute sacks do not give the tubers enough protection from light: piles of potatoes in sacks should therefore be covered with a heavy tarpaulin or be kept in the dark in a room with the windows and other sources of light obscured. Bags made of a double thickness of paper may be used, but those made of transparent (polythene) sheeting should never be

used to display potatoes in the light.

It is advised that only the bottom of plastic polythene bags be transparent; the rest of the bag should be opaque or very dark-coloured: this type of bag allows the contents to be examined while protecting them from the light.

During the retailing of potatoes, it is recommended that only a small quantity be put on display at a time, the bulk of the stock being kept in the dark.

Mrs. Simon Trudeau hoeing potatoes in her garden at St. Beloeil, Verchères.





Clean white buildings on the island of Orleans make an attractive background to a strawberry plantation.

# RECIPES FOR WHITEWASH

The attention of a tourist driving through the countryside is sometimes caught by the attractive appearance of a farm whose buildings, though not very large or imposing, seem to reflect the pride and "joie de vivre" of the people who live there. In contrast, you yourself may have been a little shocked sometimes by the dismal look of a barn with faded walls that have never seen a bit of whitewash, let alone paint. One can easily imagine the kind of impression made on passers-by when a building like that is surrounded by an array of broken-down fences, piles of odd boards, discarded implements, and heaps of scrap-iron, supposedly "temporary" but actually permanent. (The list of eyesores could be even longer.)

## Beautifying the farm

The beautification of farm buildings, entrances, and surroundings not only makes country life more pleasant but is also a tacit invitation to tourists to come and visit us every year. In many cases, it only needs a little whitewash and a few days' work to completely transform the buildings. Nothing spoils the rustic, peaceful beauty of our countryside like a lot of depressing-looking old buildings. Apart from that, spring-cleaning farm buildings also prolongs their life; but it is important that it be done inside as well as outside. Cleaning, painting, and whitewashing of buildings can be done on wet days, but, for the outside, it is necessary to wait until surfaces are dry.

## Whitewashing

Lime makes an inexpensive protective coating. Unfortunately, if it is simply mixed with water it does not last long and the whitewashing has to be repeated quite often. However, there are several ways to make whitewash stick better and last longer. (See recipes below.)

A clean, bright building is more hygienic and is certainly more cheerful for the people on the farm. Whitewashing the interior of barns, piggeries, poultry houses, etc., with lime to which a good disinfectant has been added destroys many insects and

germs. Gillett's Lye at the rate of half a tin per 10 gallons of whitewash can be recommended. In this way one makes the inside of the building both brighter and more sanitary — thus killing two birds with one stone.

Before being whitewashed, a building must be given a thorough clean-up. All cobwebs and dust should be swept away. Scrape off any manure clinging to walls, wetting the surface if necessary. Carry out repairs where needed. This work can be done on rainy days or during lulls in the field-work.

## How to prepare whitewash for interior work

Slake 50 pounds of quicklime in 8 gallons of water; dissolve 10 pounds of salt and one pound of alum in 6 gallons of warm water and add this solution to the lime. When ready to apply, add 1 lb. of cement to each 3 gallons of the mixture, stirring thoroughly until the whole is well mixed. In place of lye a disinfectant with a creosote base may be used but in this case the finished surface will not be as pure a white. Lysol is also a good disinfectant to mix with whitewash.

## How to prepare whitewash for exterior work

A waterproof whitewash for outside walls may be prepared as follows: slake 62 pounds of quicklime in 10 gallons of water, stirring during the slaking; then add 2 more gallons of water. Mix 2 gallons of skim milk into the total mixture. The addition of one ounce of alum will improve the whitewash but is not absolutely necessary. If you are going to whitewash metal surfaces, do not add any salt as this may cause rusting. Nowadays quicklime is more difficult to procure than in the past. However, it may be replaced by the hydrated lime used by contractors, provided that the quantity of water recommended above is reduced so that the whitewash will have the required density.

## Preparation to render wood less combustible

In order to make surfaces less flammable, a whitewash containing water-

glass may be used. Water-glass can be purchased in large hardware and chemical products stores. The recommended mixture consists of one gallon of water-glass with ten gallons of whitewash (or half a gallon of water-glass with five gallons of whitewash). Casein glue is then added to the mixture to make it stick better. One gallon of this preparation may cover 250 square feet of surface. In the case of a shingled roof it is better to apply two coats.

For making the whitewash, hydrated lime sold in 50-pound bags is recommended nowadays. It should be left to soak in a large container for a couple of days in advance in accordance with the instructions on the paper bag. It takes about 7 gallons of water to soak 50 pounds of hydrated lime. The lime should be spread evenly in the water and the mixture stirred briskly. It should then be allowed to stand for at least 16 hours, after which the preparation will have the consistency of a thick paste. This paste should then be thinned with water containing the other ingredients.

## Another recipe

For 50 pounds of lime, procure 5 pounds of casein glue and one gallon of water-glass. Dissolve the water-glass in 4 gallons of boiling water, stirring briskly because an even mixture of water-glass and water is difficult to obtain. Let this mixture cool a little, then dissolve the casein glue in a little of the above liquid. Thin the glue by gradually adding the water-glass solution until these two constituents are well mixed. Then dilute the lime paste (prepared beforehand) with this mixture and add water as needed.

Some people do whitewashing by contract spraying. A commercial service of this type can be very helpful if one wants to get the job done in a hurry when labour on the farm is scarce.

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

# SEED TESTED FOR GERMINATION FREE OF CHARGE

The Department of Agriculture and Colonization operates a laboratory for testing the germination of seed grain. This service is provided free of charge for farmers, but they are urged to send samples for testing as early as possible *before* the laboratory becomes loaded with work as it does every year at seeding time.

## Taking samples

To obtain a representative sample of your seed grain for testing, take several lots of grain, each from a different part of the bin (varying the depth as well as the place). Mix all the lots well together and send one pound of the mixture to the laboratory addressed as follows:

*Seed Testing Laboratory  
Plant Products Department  
Institute of Agricultural Technology  
La Pocatiere, Kamouraska, Que.*

Be sure that your own name and address is written on the outside of each parcel and is also attached to the contents inside.

## Testing procedure at the laboratory

When the sample is received at the laboratory, it is given a number to identify it throughout the year. After it has been put through a fanning-mill, two sub-samples of one

hundred seeds each are taken from it at random for the germination tests. These seeds are sown in a mixture of three parts of sand to one part of "terralite" in two boxes measuring 5" x 5" in area by 1 3/4" in depth, at the rate of 100 seeds per box.

Germination begins at the end of three or four days and, by the sixth day, most of the seeds having good powers of germination are putting out their first leaves. However, the count on which the per cent germination is based is not made until the ninth or tenth day—by which time the young seedlings are three to five inches high. The number of seedlings in both boxes is then counted and divided by two to obtain the percentage germination. Two or three weeks after the sample was received, a report on its germination is sent to the farmer who sent it and also to his agricultural representative. The laboratory keeps enough of the seed on hand to repeat the test in case any doubts arise about the results of the first one.

## Special examination

When the percentage germination is low, the seeds in the boxes are carefully examined to find out if they were immature or frozen or if the



seedlings are abnormal and whether their roots are deformed or lacking.

In some cases, sound-looking seeds with low germination are given special treatments, such as vernalization. This consists in placing the sample in a refrigerator or even exposing it to sub-zero temperatures for a few days to reduce the resting period or "break the dormancy" of the seeds. The average improvement in germination obtained by these treatments during recent years has not exceeded 6 to 10 per cent.

## Don't wait till spring

In view of the rush of requests received by the laboratory as the seeding season approaches and the time it takes to carry out the tests, farmers are urged to send in their samples without delay. They will then get the results of the tests early enough to take steps to obtain better seed if necessary.



# REORGANIZATION IN INSPECTION OF FRUITS AND VEGETABLES

*Raising really fresh vegetables in the garden of Mrs. Laliberté, Honfleur, Bellechasse.*



Mr. Clément Vincent, Minister of Agriculture and Colonization has announced that, in future, growers and consumers of fruits and vegetables in the province of Quebec will benefit by the same protection as those in other provinces. Following talks between Mr. Vincent and officials of his ministry and representatives of the Canadian government, the said government has agreed to appoint nine new inspectors for fruit and vegetables in the province of Quebec. These inspectors will work in growing centres as well as at unloading and shipping points.

*(please turn to page 21)*

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Department of Agriculture and  
Colonization.**



# THE BETTER IMPULSE

News and Views of the Women's Institute of Quebec

## SEMI-ANNUAL, 1967

February 10, 11, the QWI Board members gathered at the YWCA, Montreal, from all parts of the Province for their semi-annual meeting, some having to travel all night from the Gaspé and northern counties.

The county presidents and provincial convenors held a meeting on the Friday morning where they discussed their own special problems. In the afternoon the QWI were hosts to the Montreal Council of Women at a Joint Conference, which has been a unique and valuable event for many years, bringing together women from the urban and rural areas to present their viewpoints on subjects important to each.

The MCW chose as subjects: Section IV of the Parent Report on Education, Proposed Amendment to Civil Code re Matrimonial Regime, Housing for Young Girls in Montreal.

The QWI : The Rural Woman and the High Cost of Living, Canada's Centennial Through the eyes of a First Canadian.

(This was so ably presented by Mrs. Harry Oke of the Oka WI we think all should read it, so it is printed elsewhere in this issue of the Journal)

The QWI as requested by the MCW also reported on their QWI Hospitality Expo work and their Centennial projects.

The Conference was followed by tea and the regular business resumed in the evening. It was announced that the Salada Foods are again sponsoring a contest, and although it is late for those wishing to enter, the rules for the handicrafts will be going out immediately to each branch.

The Leadership Course will be held May 15-18 under the direction of the QWI.

The schedule of country visits was presented and all counties are asked as soon as possible to let the visiting Executive member know the place and time of their meeting.

A full report of the Minutes will be sent later to each branch president. It is expected that she will study this and report on it at her next meeting. □

Dear Fellow Members:

### HEAR YE! HEAR YE!

A Centennial Project of the Federated Women's Institutes of Canada is now an accomplished fact!

To raise \$20,000 by January 1, 1967, by means of Unesco Gift Coupon Plan #367, for an adult education program for the women of Northern Canada was a most ambitious plan, a challenge we were given three years ago.

To say that it has been a success is putting it mildly! Not only have we "gone over the top" by a substantial amount (not all in yet) but the expending of the money has brought worthwhile results: the trips of the Field Workers into the Mackenzie District and the Yukon; the attendance of an observer from the Northern Canada Women's Institutes at the Third National Convention in 1964, materials of all kinds furnished to help with pro-

grams; and more recently, the First NCWI Convention in Inuvik, August 1966. All this adding up to constructive work among our membership there: the Indians, Eskimos and others. All delegates to that first NCWI Convention expressed their deep appreciation at what has been done for them, through this Fund.

None of this could have been achieved without your generous support. To all contributors, of small as well as of large amounts, we give our grateful and heartfelt thanks.

It has meant the beginning of a most important work "For Home and Country", right here at home in our vast Northland. I say, *a beginning*, because of course, we cannot stop here. There needs must be a follow-up. Just what form that follow-up will take will be decided by you at the Fourth National Convention in June of this year. The

Northern Canada Special Projects Committee is meeting soon and will be formulating recommendations to be presented for your consideration at that time. Any contributions that are sent in, in the meantime, will be set aside for a continuation of the work and be very much appreciated.

Again, on behalf of the NCSP Committee and the FWIC Executive, I want to express to you all our appreciation and gratitude for an outstanding undertaking that has been well done, one of which we can be justly proud.

Sincerely,  
*Mrs. J. Philip Matheson,*  
*President,*  
*Federated Women's Institutes of*  
*Canada.*

*NCSP Committee:*  
*Mrs. Jas. Haggerty, Chairman*  
*Mrs. R. J. Penney, Secretary*  
*Mrs. G. E. LeBaron*  
*Mrs. J. Philip Matheson*  
*Mrs. H. G. Taylor*

# Mrs. WILLIAM SCOTT McELROY

Charter member of Dunham W.I.,  
Quebec's first Women's Institute

Mrs. William Scott McElroy died at her home in Dunham, Quebec, on Sunday, January 1, 1967. Her daughters, the Misses Helen and Alice McElroy, R.N., have cared for her during her many months of illness.

Born in 1879 near Farnham, at Stanbury, Jennie Luella Smith was the daughter of Herbert H. Smith and his wife, Cynthia Bowker. She attended the local school in Stanbury, the High School in Granby, Dunham Ladies' College, then went on to McGill Normal School where she received her diploma for teaching. She taught for a few years before her marriage to W.S. McElroy on August 23, 1905.

Mrs. McElroy resumed teaching for a few years, and had the unique experience of having her eldest son, Herbert, and daughter, Helen, as her pupils when teaching at the "Laraway" School.

Intensely interested in seeing farm women better their living conditions, she became a charter member of the first Women's Institute organized in Quebec Province at Dunham in 1911, and continued an active member all her life. In 1951 she received a Life Membership and pin from the Provincial W.I. at a special ceremony honoring the Charter members of this first Branch. In 1961, when Dunham celebrated their 50th anniversary, she gave



MRS. McELROY

a splendid résumé of the work done during those years by the Dunham members. Listening to this report, one learned that this Branch had remained among the most active in the Province during its entire existence. In the same year she was able to attend the Jubilee ceremonies at Macdonald College; and the crowning joy of her W.I. work took place on July 15, 1964, when she was 85 years old and had the honor of unveiling the Cairn erected in Dunham, to honor Mrs. Beach and the first W.I. in the Province.

Her church work, first in the Methodist, later becoming the United Church, was always one of the "firsts" in her life. She had held office during many years of the "Ladies' Aid", later the U.C.W., and this group presented her with a Life Membership and pin. It was mainly through her efforts in gathering old minute books and records and preserving them, that the history of the church in Dunham has been written.

Mr. and Mrs. McElroy lived all their married life on their farm west of Dunham until 1937, when they retired in the village. In 1955 the Women's Association tendered them a turkey dinner in the church hall to mark their 50th wedding anniversary. At this time the Rev. J. J. Hutchinson of Vermont, who had been the assisting clergyman at their wedding, offered the toast to them.

Mrs. McElroy was also a valued member of the Missisquoi County Historical Society.

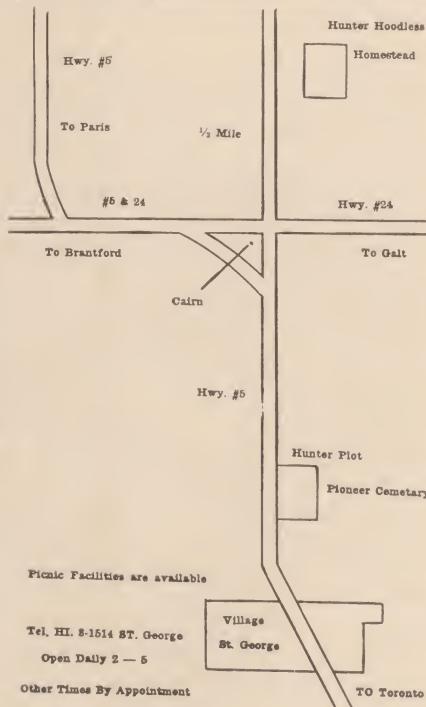
Mrs. McElroy was buried in Chapel Corner cemetery, Dunham, beside her husband who predeceased her in 1963. A son, Arthur, lost his life in World War II, in 1945. There are three sons and two daughters and six grandchildren living.

## To Find the Hunter Hoodless Homestead



The Adelaide Hunter Hoodless Homestead where Adelaide Hunter, later Mrs. Hoodless was born and where she lived as a girl.

We are told that a great many visitors, sometimes busloads from another part of Ontario, travel to Stoney Creek, the birthplace of Women's Institutes,



expecting to find Hunter Hoodless Homestead there.

The diagram (left) shows the location of "the Homestead," the house where Adelaide Hunter was born in 1858 and where she lived until she married John Hoodless in 1881. The house is only one-half mile from Highway 24, near the village of St. George in Brant county. The nearest cities are Brantford and Galt. Stoney Creek is farther away close to the city of Hamilton.

## CENTENNIAL PUBLICATION

The Centennial Commission is announcing another publication called The Centennial Symbol. This gives ideas for using the symbol by individuals, families or in your organizations.

If you would like a copy, order from Centennial Commission, P.O. Box 1967, Ottawa, Canada.

# The Month With The W. I.



**ABITIBI EAST:** **Malartic** heard talk on wills by notary; held their Annual Banquet at local restaurant; held children's Christmas party, with special entertainment by a local "Melandica" group who played many Christmas carols; distributed mitts in the three schools to needy children; home movies of the last 3 Children's Christmas parties have been taken, and these were shown to members and enjoyed by all; sold a most attractive painting.

**ARGENTEUIL:** **Arundel's** program on education was a written contest on Current Events, put out by the Montreal Star, with prize for winner; answered roll call with What I Would Like to Learn in 1967. **Brownsburg** named an important event in this county as roll call; held Tupperware demonstration. **Dalesville-Louisa's** roll call was something sewn, knitted or baked by members; these were then exchanged; discussed continuing County Drama Competition, with committee chosen to select a play; Mrs. Ross Swail, guest speaker, gave a demonstration on sewing, giving many useful hints, one of which was continuous bias binding. **Frontier:** each member read a verse by Robert Burns; donation to Children's Hospital; member congratulated on occasion of her 25th Wedding Anniversary; several contests enjoyed, with prizes given. **Jerusalem-Bethany** entertained County President, Mrs. C. Hall; as roll call gave written suggestion for next year's program. **Lachute:** Mrs. G. Muir, convener of Home Economics organized successful sale of home cooking and handicrafts. **Pioneer** sing O Canada at each meeting as Centennial interest, and each member has purchased and is flying a Canadian Flag; held a sewing meeting; received gift of a Bow-tie Quilt top from Mrs. E. Kerr, which will be quilted and sold. **Upper Lachute East End** answered roll by showing and telling about old and unusual buttons; Mrs. L. Hume was auctioneer for very successful sale of aprons made by members; each member to knit 2 eight-inch squares for an afghan which will be sent to Red Cross; donated to Lachute High School Primary Library Fund; guest speaker Miss Louise Miller gave interesting information on different ways of Banking.

**BROME:** **Austin** donated to School Cafeteria, UNICEF, Cecil Butters Home, Austin Library, and QWI Service Fund. **Knowlton's Landing** held a wrapped-gift sale; gift to former member who is moving away. **South Bolton** contributed their share for the care of a refugee child, donated to Quebec Service Fund. **Sutton:** each member gave an item of interest that will be enjoyed at Expo; papers read on WI Branches in the North, and by 3 conveners; each member to make a Christmas Stocking; as Centennial project will place a bilingual memorial plaque, and will work to make their town more beautiful.

**CHATEAUGUAY-HUNTINGDON:** **Aubrey-Riverfield:** 2 handmade quilts donated to the branch who in turn sent them to the Welcome Hall in Montreal; toys sent to Children's Home in Lachine; turkey dinner held; Centennial quiz held, won by Mrs. Wolodarsky. **Hemmingford** went "Round the World" with short travel talks by 14 speakers, most of whom were members, with pictures, souvenirs, books, and carvings used for illustration. **Huntingdon:** talk on Adelaide Hoodless Home; and on little-known important facts about Canada; held cake-naming contest; shirts sent to Cancer Society.

**GASPE:** **Gaspe** enjoyed a social evening of cards and games; named birth month, stone and flower as roll call. **Sandy Beach** welcomed a new member; sent old and new clothing to Unitarian Service; Christmas Tree for all parish children with gift of fruit and candy for each child; held annual Christmas party with many guests invited; gifts sent to Hospital and to the San. **Wakeham** sent parcels of clothing to Unitarian Service and to Douglas Hospital.

**MEGANTIC: Inverness:** Roll Call: name a city or country you would like to visit and tell why; gifts sent to former members who are ill; showed slides at the Kinnear's Mills Senior Citizens Home, which were much enjoyed by the residents. **Kinnear's Mills** sent gifts to this same home; get well wishes to their president who is hospitalized; as roll call each member told of one special thing they planned to do this winter; enjoyed Bingo with prizes.

**MISSISQUOI:** **Cowansville** sent flowers to shut-ins; answered roll call by describing an antique which she had brought; contest on jumbled names of antiques; slides shown of old scenes in Cowansville, and of Upper Canada Village. **Dunham** held a sale of gifts; sent gift to hospitalized child. **Fordyce** quilted a quilt; contest held on making small words from the word "associated". **Stanbridge East** gave New Year's Resolutions as roll call; enjoyed game on Predictions for 1967; attended party given by the Home Demonstration Unit of Richford, Vermont; pillows and cotton sent to Cancer Society; Centennial spoons sold on commission.

**MONTCALM:** **Rawdon** have undertaken to supply needy local family of 5 young children with school lunch of soup and milk during winter.

**PAPINEAU:** **Lochaber** donated to Cup-of-Milk Fund; contest on "fractured phrases"

**PONTIAC:** **Beechgrove** discussed purchase of wheel chair for benefit of the community; committee named to investigate further. **Fort Coulonge** for roll call, gave recipe for favourite Christmas dessert; also brought favourite cookie recipe and a dozen cookies to sell; donated to Ade Home, and TB Seals; several readings given including current events and household hints; demonstration on making a place mat. **Quyon** will send gifts through the New Year to Ade Memorial Hospital; readings on Customs in Other Lands. **Shawville:** heard Mr. Cyril Dale speak in a most interesting fashion on his work with the RCMP, with a question and answer period; a new bridge marathon arranged to start immediately, following the successful conclusion of the fall marathon, and distribution of prizes; donated to Cup-of-Milk Fund. **Wyman** held program on Famous Canadian Women, some who live in our own community but do not receive publicity; Centennial project is a roadside area; levelling and seeding has already been done; and 6 roadside picnic tables will be placed in spring.

**ROUVILLE:** **Abbotsford** held white elephant sale; gift of diapers sent to Butters Children's Home; special Christmas party held with school children of the district joining the meeting, for carol singing and refreshments.

**SHEFFORD:** **Granby Hill** donated funds to High School to provide lunches for needy child, discussed Picnic Area Centennial Project, with committee now investigating use of private land for this. **Granby West** held chicken pie dinner for needy children; treasurer held contest naming city or country starting with letters in word "treasurer". Waterloo-Warden held contest on Leaders in Quebec; collected Pennies for Friendship.

**SHERBROOKE:** **Ascot** held family supper at the Experimental Farm, after which Mr. P. Sylvestre, director of the Farm, showed slides and spoke of his trip to Europe with an Agricultural Study Group; branch has been working on project for naming of local roads, and now have a list of names ready for submission to Council of Ascot Township; sold UNICEF cards; held quiz on Flags; crate of oranges sent to Grace Christian Home; cancer dressings made. **Belvedere** welcomed 2 new members; guest speaker showed coloured slides of points of interest in Florida, the Caribbean and Hawaii; holiday greetings from sister branches and friends were read. **Brompton Road**

renewed subscription to Federated News; school fair prize list distributed; Pennies for Friendship collected and donation to Save the Children Fund; will make Christmas stockings again. **Lennoxville** donated to School Hot Lunch Fund at Lennoxville HS; blankets given to 2 families who lost their homes by fire; exchanged Christmas recipes; gifts sent to cancer patients. **STANSTEAD:** Beebe sent gift to Retarded School at Dixville. **Hatley:** guest from Holland gave talk on Dutch customs, including Christmas; each member named a Christmas custom of another land; knitted socks sent to Maplemount Home and to Dixville Home. **Tomifobia** heard article on Accidental Poisoning of Children; learned that there are now 2 Poison Control Centres in Sherbrooke, one at the Hotel Dieu, one at the

Sherbrooke Hospital; as Centennial project, voted funds to buy books for school libraries at Sunnyside and Ayers Cliff Schools donated to Quebec Service Fund; plants sent to hospitalized members.

**TWO MOUNTAINS:** Oka members chartered a bus and took day's trip to Ottawa Exhibition, which proved to be a most enjoyable outing; held a successful bazaar, with members making and selling handcraft articles; Annual Christmas Tree held with gifts and candy to all Indian children up to 12 years of age. **VAUDREUIL:** Harwood enjoyed a social evening, with games and contests organized by Social Convener, Mrs. W. Ratcliffe. A beautiful Canadian Flag has been purchased by the branch to mark Centennial year. □

## CANADA'S CENTENNIAL AS SEEN BY A FIRST CANADIAN

by Mrs. H. Oke, Oka, Que.

This Centenary year offers us, as Canadians, a chance to see ourselves as others see us and also our country especially this summer when so many will be visiting our country, maybe for the first time, for EXPO 67.

We all know that love of one's country involves knowing what the country was in the past, what it is now and what it may become and working toward a resulting ideal.

We look back with very deep sympathy and gratitude for all the toil and tribulations of our early ancestors who lived during rugged early times, and as we strive to improve the rich heritage they left us, we find it an occasion for pride and for meekness at the same time.

This Nation established at Confederation a century ago is a Continental one made up of many ethnic groups living in separate provinces. One group proud to call themselves patriotic Canadians and once said to be a vanishing race, today the Indians, are said to be the fastest growing ethnic group in Canada. They have reached the 250,000 mark. There are 557 separate communities, known as bands. They are not a simple people, because they are divided into 10 basic linguistic groups and in turn sub-divide into many regional dialects. The Iroquois being the most well known living in the provinces of Quebec and Ontario.

The cultures and customs that grew out of how they adapted to their environment are fascinating to remember. Their life was greatly changed when the Europeans arrived and began their endless thrust for occupation of almost all the territory once possessed by the native people. We may recall it was the Indians who taught the newcomers how to make snowshoes and canoes. To the Indians the forest was home;

they were as much a part of the woods as the herds of deer and innumerable game birds. The forest gave them everything they needed for their simple way of life; they hunted game and fished in sparkling streams; and they travelled the rivers as roadways in their birch bark canoes.

The bark was sewn together with the long thin roots of the Tamarack tree and water-proofed with the thick resin of gum trees.

Their homes were strips of birch bark sewed over frames of pine poles. Snowshoes were invented for walking over deep snow by lacing rawhide thongs over bent frames of ash or hickory. Many agricultural products were developed by them, such as corn, beans and tobacco, to name a few.

They showed the white man how to hunt moose and fur-bearing animals such as beaver. Also it is well to remember many Indian names that have become history as they linger in Canada's lakes, cities, towns and rivers. The most famous being Kanata taken from the Mohawk meaning village or collection of buildings.

The old Indian Culture has been absorbed but it should never be forgotten. In history books conflicts are stressed leaving out much of the contribution of the Indian way of life, and what it has given us today. Not too long ago Indians were not regarded as full citizens. I believe many are too often apathetic in their approach toward adapting to what is to them a very complex type of society and conditions thrust upon them they do not understand.

There are 2,241 reserves throughout Canada and I believe where I live, in Oka 35 miles from Montreal, that it is unique in that we live together with a great number of non-Indians. Some who venture into urban life seek-

ing jobs feel the reserve is always a place to go back to if they become lonely or unable to adjust to off-reserve life. Other Canadians from rural areas often react the same way.

A great deal of progress has been made with improved medical care, better housing and a greater interest in getting more education. *Integration of Indian children in the schools is an important step in the progress of education of Indian children.* It is to be hoped that in time with more education, more young people in all forms of endeavour and professions, that the Indians can take over leadership in conducting their own affairs. Only when this happens can they prove their ability to take a rightful place in Canadian life. Only then will the Indian gain understanding in preference to sympathy and be responsible for his destiny as a participating Canadian citizen.

In this year of Canada's Centennial we are confident it is our destiny to unite and not to divide. Learning to be better Canadians should be the aim of each one of us, working co-operatively and not dwelling only over dead ashes of the past. I believe the aims of the Quebec Women's Institute and other similar groups toward better understanding of all people regardless of race or creed, of overlooking petty differences, is a very worthy one. It is gratifying too that interest and concern for the plight of Canada's native people is shown in the fine work of the Q.W.I. in encouraging native handicrafts in the far north. I might just mention I always enjoy reading the bulletin "Northern Lights" and am interested in all their many activities.

So in conclusion, it is my hope that we go forward confidently into this Centennial year, working as best we can for HOME and COUNTRY.

## REORGANIZATION —

(concluded from page 16)

The Government of Canada is also engaging more than twenty other inspectors who will work at the retail level. To begin with these inspectors will work in Montreal and Quebec, later extending their activities to other cities in the province.

Mr. Vincent pointed out that this increase in the number of inspectors will more than double the number previously employed and will ensure better protection for the entire fruit and vegetable industry, especially for the consumers, who will be able to buy Quebec products with complete confidence.

"When all the new inspectors are operating," concluded Mr. Vincent, "the Department of Agriculture and Colonization will reorganize its inspection service so as to assure all producers and consumers of the best possible service."

### CORRECTION

An error crept into Dan MacArthur's article, "Morgan Arboretum—Maple Results in 1966" in the February issue.

Please correct your copy, page 9, Table 2, to read "Old tap-holes pelleted 3.2" and "Old tap-holes unpelleted 0.4 gallons sap per tap". The two columns were transposed.

## BURSARIES FOR POSTGRADUATES

In order to encourage the education and training of the scientists needed in Quebec agriculture, the Quebec Agricultural Research Council has recommended the awarding of 18 post-graduate bursaries to enable students of Quebec, who will obtain their degrees in May 1967, to continue their studies at the master's and doctor's levels.

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## INSIDE

### THE EDITOR'S COLUMN

(concluded from page 4)

beat a path to that door, and were always generously received and sympathetically aided. The scale of Professor Avison's student loan activities will never be known. At least, he would never discuss them; but his beneficiaries have not been silent. They have seen that the record is clear.

Harry Avison's extension and adult education activities were so numerous and varied that justice cannot be done to them in these few lines. He was Associate Editor of this Journal at the time of its founding in 1940; many are the stories told of that era. In addition to regular programmes of extension in agricultural subjects, in public affairs, in home economics and handicrafts, he during his years at Macdonald provided the leadership in the organization of more than one hundred Community Schools over the Province and dozens of short courses at the College and in the community. These created a substantial Macdonald image over rural Quebec as well as providing inspiration to thousands.

Two decades before the Quiet Revolution was heard of, Professor Avison in co-operation with extension workers from Laval University conducted an annual series of ten-day summer camps for the purpose of promoting closer understanding between the two language groups of the Province. To Camp Laquemac each year came fifty or sixty French and English speaking educators, religious leaders, government workers and many others to discuss social, cultural and political problems under the guidance of notable provincial, national and international leaders. The verdict: Laquemac was a pioneering, unique, and successful undertaking.

Harry Avison's most manifest memorial at the College is the McLennan Travelling Library. Considering his combined love for people and books he could wish no finer memorial than this Bookmobile Library which serve large areas lacking public libraries or with scant school libraries. It is little realized, even at the College, that the McLennan Library has for years sent books by express to places as distant as the far reaches of the Gaspe and even to the Arctic. His membership on the Quebec Library Commission was recognition of his many contributions in this area and of his leadership in the establishment of other libraries in the Province.

Understandably Harry Avison was recognized and esteemed far beyond Quebec. He was certainly among the best known of Macdonald people throughout Canada and the United States. This recognition was expressed in his membership on most of the influential Canadian and American committees concerned with adult education. It was soon after his arrival at the College that Farm Radio Forum pioneered a new kind of adult education. Today, the ripple of the movement is felt in far away India and Africa. Then, when Citizen's Forum was launched, it was largely as a result of his persistent efforts, and it was out of his war-time work that the Extension Film Library came into being. These projects reflected co-operation with the Canadian Association for Adult Education, the Canadian Broadcasting Corporation, the National Film Board and other agencies. He had a major responsibility in the preparation of the Canadian Association for Adult Education Manifesto of 1943.

Too little can be said here to do justice to his pre-Macdonald pioneering work in Adult Education, to the difficult years at The Pas, in Manitoba, to the rewarding years as secretary of the Student Christian Movement, to his earlier years as an ordained minister, and to his boyhood in British Columbia.

In his last few years with McGill he was Director of Extension in addition to a continuing responsibility for Macdonald Extension work. This gave him many new responsibilities including the Evening Courses at McGill—he had already made a fine achievement in this area at Macdonald. It also gave him a leading role in such fields as educational television. His last official duty on behalf of the University was to return to Montreal only weeks before his death to participate in the selection of the world renowned speakers who will establish for the Montreal World Fair its cultural and scientific excellence.

While his professional achievements leave an enviable record, Harry Avison will be best remembered for his advocacy of and living to an exceptionally high standard of humane values. He was an unswerving friend, a fabulous story teller—and a man who enjoyed fun and recreation, whether it was reading, wandering over the mountain trails of his British Columbia boyhood, going to races or playing a game of poker with his friends.

Let us honour the memory of the complete man.